

FACT SHEET STATEMENT OF BASIS
JORDANELLE SPECIAL SERVICE DISTRICT WATER RECLAMATION FACILITY
PERMIT: DISCHARGE, BIOSOLIDS & STORM WATER
UPDES PERMIT NUMBER: UT0025747
UPDES BIOSOLIDS PERMIT NUMBER: UTL-025747
UPDES MULTI-SECTOR STORM WATER GENERAL PERMIT NUMBER: UTR000000
MAJOR MUNICIPAL

FACILITY CONTACTS

Person Name:	Dan Matthews
Position:	General Manager
Facility Name:	Jordanelle SSD WRF
Mailing Address:	P.O. Box 519 Heber City, UT 84032
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Actual Address:	5400 North Old Hwy 40 Heber City, UT 84032

DESCRIPTION OF FACILITY

Jordanelle Special Service District Water Reclamation Facility (JSSDWRF) has a design flowrate of 1.0 million gallons per day (MGD). The facility serves the developments in the area of Jordanelle Reservoir north of Heber City in Wasatch County, UT. The facilities flow passes through; fine screens, and then through a series of anaerobic and aerobic tanks (which is a biological aid in the removal of phosphorous), then through a membrane bio-reactor (which will include the addition of alum for further phosphorous removal), then through an ultra violet (UV) disinfection system. The solids handling consists of an aerated solids handling basin and a belt press for dewatering. The outfall is located at latitude 40° 34' 20" and longitude 111° 25' 42".

DISCHARGE

DESCRIPTION OF DISCHARGE

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 40° 34' 20" and longitude 111° 25' 42". The discharge is through a 14 - inch diameter concrete pipe leading from the UV disinfection process to the Provo River.

RECEIVING WATERS AND STREAM CLASSIFICATION

The final discharge flows into the Provo River. The Provo River has been classified as Class 1C, 2B, 3A, and 4 according to *Utah Administrative Code (UAC) R317-2-13*.

Class1C	-Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water.
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- Class 2B -Protected for secondary contact recreation such as boating, wading, or similar uses.
- Class 3A -Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.
- Class 4 -Protected for agricultural uses including irrigation of crops and stock watering.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD₅), and ammonia that are more restrictive than secondary standards are incorporated because the Provo River is designated as a blue ribbon fishery and a drinking water source. Limitations for E. Coli, pH, total dissolved solids (TDS), and percent removal for BOD₅ and TSS are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. The Dissolved oxygen limit is based on the Waste Load Analysis (WLA). The total phosphorous limitation is based on a Total Maximum Daily Load (TMDL) study that has been approved by EPA. The oil and grease is based on best professional judgment (BPJ). The permit limitations are:

Effluent Limitations (Outfall to Provo River) /a						
Parameter	Yearly Maximum	90 Day Average	Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
Total Flow, MGD	NA	NA	1.0	NA	NA	NA
BOD ₅ , mg/L	NA	NA	10	10	NA	NA
BOD ₅ , Minimum % Removal	NA	NA	85	NA	NA	NA
TSS, mg/L	NA	NA	10	10	NA	NA
TSS, Minimum % Removal	NA	NA	85	NA	NA	NA
E. Coli, no./100mL	NA	NA	126	157	NA	NA
Dissolved Oxygen, mg/L	NA	NA	NA	NA	5.0	NA
TDS, mg/L	NA	NA	NA	NA	NA	1200
Total Phosphorous, mg/L, (Interim) /e	NA	NA	NA	NA	NA	0.15
Total Phosphorous, mg/L (May-Oct), (Final)	NA	0.03	NA	NA	NA	0.08
Total Phosphorous, mg/L (Nov-April), (Final)	NA	0.06	NA	NA	NA	0.10
Total Phosphorous, lbs/year	91	NA	NA	NA	NA	NA
Ammonia, mg/L	NA	NA	0.8	NA	NA	NA
Oil & Grease, mg/L	NA	NA	NA	NA	NA	10.0
pH, Standard Units	NA	NA	NA	NA	6.5	9.0
WET, Acute Biomonitoring	NA	NA	NA	NA	NA	LC ₅₀ > 8.3% effluent
WET, Chronic Biomonitoring	NA	NA	NA	NA	NA	IC ₂₅ > 1.2% effluent

NA – Not Applicable.

SELF-MONITORING AND REPORTING REQUIREMENTS

The permit will require reports to be submitted monthly and quarterly, as applicable, on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period. Lab sheets for biomonitoring must be attached to the biomonitoring DMR.

Self-Monitoring and Reporting Requirements /a			
Parameter	Frequency	Sample Type	Units
Total Flow /b /c	Continuous	Recorder	MGD
BOD ₅ , Influent /d	2 x Week	Composite	mg/L
BOD ₅ , Effluent	2 x Week	Composite	mg/L
BOD ₅ , Minimum % Removal	2 x Week	Calculation	%
TSS, Influent /d	2 x Week	Composite	mg/L
TSS, Effluent	2 x Week	Composite	mg/L
TSS, Minimum % Removal	2 x Week	Calculation	%
E. Coli f/	2 x Week	Grab	mg/L
Dissolved Oxygen	2 x Week	Grab	mg/L
TDS	2 x Week	Grab	mg/L
Total Phosphorus	2 x Week	Grab	mg/L
Ammonia	2 x Week	Grab	mg/L
Oil & Grease	Monthly If Sheen is Observed	Grab	mg/L
pH	2 x Week	Grab	SU
WET, Acute Biomonitoring	Quarterly	Composite	Pass/Fail
WET, Chronic Biomonitoring	Quarterly	Composite	Pass/Fail
Metals, Influent	2 x Year	Composite	mg/L
Metals, Effluent	2 x Year	Composite	mg/L
Organic Toxics	2 nd and 4 th Year	Grab	mg/L

a/ See Definitions, *Part VIII*, of the permit for definition of terms.

b/ Flow measurements of influent/effluent volume shall be made in such a manner that JSSDWRF can affirmatively demonstrate that representative values are being obtained.

c/ If the rate of discharge is controlled, the rate and duration of discharge shall be reported.

- d/ In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for this constituent in the discharge.
- e/ The interim limit is provided to allow a period of time to optimize the process upon start up of the facility. The interim limit will expire October 01, 2009.
- f/ In order to ensure multiple treatment barriers for the removal of pathogens for human health protection, JSSDWRF will be required to continually operate the Ultra Violet (UV) disinfection system at the manufacturers recommended intensity.

Should JSSDWRF not comply with permit conditions, including but not limited to the yearly maximum load for phosphorous, JSSDWRF will divert the effluent discharge to the Heber Valley SSD lagoons by pipeline in accordance with the agreement between JSSDWRF and Heber Valley SSD. This option would be considered an approved and the preferred option for any bypass or upset condition of the treatment facilities as stated in Part VI.G and Part VI.H of this permit.

BIOSOLIDS

DESCRIPTION OF BIOSOLIDS TREATMENT AND DISPOSAL

JSSDWRF screens the influent to remove the larger pieces of debris and the solids are stabilized with activated sludge treatment with a mean cell residence time of approximately 14 days with a new, state of the art membrane bioreactor plant. After stabilization, the biosolids are de-watered with a belt press and loaded into a hopper trailer to be hauled elsewhere for disposal. Since this is a new water reclamation facility, the biosolids will probably be disposed in a landfill; or may be hauled to a composting site at another location for further treatment¹, or may be hauled to a soil regeneration facility such as ET Technologies for final landfill cover at the Salt Lake County Landfill.

¹If the biosolids are hauled to another facility to meet land application requirements for sale or giveaway to the public, that facility must have a valid UPDES biosolids permit and will be responsible for meeting all requirements of *40 CFR 503*.

BIOSOLIDS MONITORING REQUIREMENTS

Under *40 CFR 503* biosolids are not required to be monitored for heavy metals content or pathogen reduction if the biosolids are disposed in a landfill.

LANDFILL MONITORING

Under *40 CFR 258*, landfill monitoring requirements, the biosolids will need to pass a paint filter test before the biosolids are disposed of in a landfill. If the biosolids do not pass a paint filter test, the biosolids cannot be disposed in a landfill.

Under *40 CFR 503.33*, the biosolids need to meet a method of vector attraction reduction (VAR). Since the biosolids will be disposed of at a landfill, JSSDWRF will need to insure that the biosolids are covered daily with soil or another approved material. If the biosolids are not covered daily, the biosolids cannot be disposed in the landfill.

LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Under *40 CFR 503.16(a)(1)*, the self-monitoring requirements are based upon the amount of biosolids disposed per year and shall be monitored according to the chart below.

Minimum Frequency of Monitoring	
Amount of Biobiosolids Disposed Per Year	Monitoring Frequency
> 0 to < 290	Once Per Year

Accordingly, JSSDWRF needs to monitor at least once per year.

MONITORING DATA

Since this is new facility there is not any monitoring data.

RECORD KEEPING

The record keeping requirements from *40 CFR 503.17* are included under *Part III.I.* of the permit. Since the biosolids are disposed in a landfill the disposal records need to be retained for a minimum of five years.

REPORTING

The JSSDWRF needs to report annually as required in *40 CFR 503.18*. This report is to include the results of all monitoring performed in accordance with *Part III.G.* of the permit, information on management practices, biosolids treatment, and certifications. This report is due no later than February 19 of each year. Each report is for the previous calendar year.

STORM WATER

STORMWATER REQUIREMENTS

Storm water provisions are included in this combined UPDES permit.

The storm water requirements are based on the UPDES Multi-Sector General Permit for Storm Water Discharges for Industrial Activity, General Permit No. UTR000000 (MSGP). All sections of the MSGP that pertain to discharges from wastewater treatment plants have been included and sections which are redundant or do not pertain have been deleted.

The permit requires the preparation and implementation of a storm water pollution prevention plan for all areas within the confines of the plant. Elements of this plan are required to include:

1. The development of a pollution prevention team.
2. Development of drainage maps and materials stockpiles.
3. An inventory of exposed materials
4. Spill reporting and response procedures.
5. A preventative maintenance program.
6. Employee training.
7. Certification that storm water discharges are not mixed with non-storm water discharges.

8. Compliance site evaluations and potential pollutant source identification, and
9. Visual examinations of storm water discharges.

PRETREATMENT REQUIREMENTS

Although JSSDWRF does not have to develop a State-approved pretreatment program, any wastewater discharges to the sanitary sewer are subject to Federal, State and local regulations. Pursuant to *Section 307 of the Clean Water Act*, the permittee shall comply with all applicable Federal General Pretreatment Regulations promulgated, found in *40 CFR 403* and the State Pretreatment Requirements found in *UAC R317-8-8*.

The permittee has not been designated for pretreatment program development because it does not meet conditions which necessitate a full program. The flow through the plant is less than five (5) MGD, there are no categorical industries discharging to the treatment facility, industrial discharges comprise less than 1 percent of the flow through the treatment facility, and there is no indication of pass through or interference with the operation of the treatment facility such as upsets or violations of the POTW's UPDES permit limits. Authority to require a pretreatment program is provided for in *19-5-108 UCA, 1953 ann.* and *UAC R317-8-8*.

JSSDWRF shall perform an annual evaluation of the need to develop technically based local limits to implement the general and specific prohibitions of 40 CFR Part 403.5(a) and Part 403.5(b). As part of this evaluation, the permit requires 2 x year influent and effluent monitoring for metals and organic toxics listed in R317-8-7.5 in the 2nd and 4th year of the permit, and sludge monitoring for potential pollutants listed in 40 CFR 503.

BIOMONITORING REQUIREMENTS

As part of a nationwide effort to control toxic discharges, biomonitoring requirements are being included in permits for facilities where effluent toxicity is an existing or potential concern. In Utah, this is done in accordance with the *State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control (Biomonitoring (2/1991))*. Authority to require effluent biomonitoring is provided in *Utah Pollutant Discharge Elimination System UAC R317-8*, and *Water Quality Standards UAC R317-2*.

Since JSSDWRF is a major municipal discharger, the permit will require whole effluent toxicity (WET) testing. Acute and chronic toxicity testing will be conducted quarterly using both the *Ceriodaphnia dubia* and *Pimephales promelas* (fathead minnows) species. The permit will contain the standard requirements for accelerated testing upon failure of a WET test, a Preliminary Toxicity Investigation (PTI) and Toxicity Reduction Evaluation (TRE) as necessary, and a toxicity limitation re-opener provision.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
Matthew Garn
Utah Division of Water Quality
February 13, 2008

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**Utah Division of Water Quality
Salt Lake City, Utah**

**WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis
SUMMARY**

Discharging Facility: Jordanelle Dam WWTP

UPDES No: UT-0025747
Current Flow: 0.00 MGD
Design Flow 1.00 MGD

Receiving Water: Provo River

Stream Classification: 1C, 2B, 3A, 4

Stream Flows [cfs]:	125.0	Summer (July-Sept)	Critical Low Flow
	125.0	Fall (Oct-Dec)	Critical Low Flow
	125.0	Winter (Jan-Mar)	Critical Low Flow
	125.0	Spring (Apr-June)	Critical Low Flow
	266.0	Average	Average Flow

Stream NH3 Values	0.05	Summer (July-Sept)	DEQ Data
	0.05	Fall (Oct-Dec)	DEQ Data
	0.05	Winter (Jan-Mar)	DEQ Data
	0.05	Spring (Apr-June)	DEQ Data

Parameter:	Effluent Limits:	WQ Standard:
Flow, MGD:	1.00 MGD	Design Flow
BOD, mg/l:	25.0 Summer	5.0 Indicator
Dissolved Oxygen, mg/l:	5.0 Summer	6.5 30 Day Average
NH3, Chronic, mg/l:	78.1 Summer	1.26 Function of pH and Temperature
ADR Level II Breakpoin	0.80 mg/l	
TDS, mg/l:	87819.3 Summer	1200.00

Modeling Parameters:

Acute River Width: 50.0%
Chronic River Width: 100.0%

Antidegradation Review Level I Completed for: NH3
Antidegradation Level II Review is NOT Required if NH3 <= 0.8 mg/l

Date: 2/25/2008

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BOD5, mgll
Metals, ugll

Total Dissolved Solids (TDS), mgll
Toxic Organics of Concern, ugll

Other Conditions

In addition to the upstream and effluent conditions, the models require a variety of physical and biological coefficients and other technical information. In the process of actually establishing the permit limits for an effluent, values are used based upon the available data, model calibration, literature values, site visits and best professional judgement.

Model Inputs

The following is upstream and discharge information that was utilized as inputs for the analysis
Dry washes are considered to have an upstream flow equal to the flow of the discharge.

**Current Upstream Information
Stream
Critical**

	Low Flow cfs	Temp. Deg. C	pH	T-NH3 mgll as N	BOD5 mgll	DO mgll	TRC mgll	TDS mgll
Summer (Irrig. Season)	125.0	20.0	8.2	0.10	0.50	6.57	0.00	128.0
Fall	125.0	12.0	8.1	0.10	0.50	---	0.00	128.0
Winter	125.0	4.0	8.0	0.10	0.50	---	0.00	128.0
Spring	125.0	12.0	8.1	0.10	0.50	---	0.00	128.0
Dissolved Metals	Al ug/l	As ug/l	Cd ug/l	CrIII ug/l	CrVI ug/l	Copper ug/l	Fe ug/l	Pb ug/l
All Seasons	1.59*	0.53'	0.053*	0.53*	2.65'	0.53*	0.83*	0.53'
Dissolved Metals	Hg ug/l	Ni ug/l	Se ug/l	Ag ug/l	Zn ug/l	Boron ug/l		
All Seasons	0.0000	0.53*	1.06*	0.1'	0.053*	10.0		• 112 MDL

Projected Discharge Information

Season	Flow, MGD	Temp.	NH3 mg/l	NH3 tons/day
Summer	1.00000	17.0	0.80	0.00334
Fall	1.00000	15.0	0.80	0.00334
Winter	1.00000	12.0	0.80	0.00334
Spring	1.00000	15.0	0.80	0.00334

All model numerical inputs, intermediate calculations, outputs and graphs are available for discussion, inspection and copy at the Division of Water Quality.

IX. Effluent Limitations

Current State water quality standards are required to be met under a variety of conditions including in-stream flows targeted to the 7-day, 10-year low flow (R317-2-9).

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Bis(2-ethylhexyl)phthalate	1.47E+02 ug/l	1.23E+00 lbs/day
Butyl benzyl phthalate	2.45E+05 ug/l	2.05E+03 lbs/day
Di-n-butyl phthalate	2.21E+05 ug/l	1.84E+03 lbs/day
Di-n-octyl phthalate		
Diethyl phthalate	1.88E+06 ug/l	1.57E+04 lbs/day
Dimethyl phthalate	2.56E+07 ug/l	2.13E+05 lbs/day
Benzo(a)anthracene (PAH)	2.29E-01 ug/l	1.91E-03 lbs/day
Benzo(a)pyrene (PAH)	2.29E-01 ug/l	1.91E-03 lbs/day
Benzo(b)fluoranthene (PAH)	2.29E-01 ug/l	1.91E-03 lbs/day
Benzo(k)fluoranthene (PAH)	2.29E-01 ug/l	1.91E-03 lbs/day
Chrysene (PAH)	2.29E-01 ug/l	1.91E-03 lbs/day
Acenaphthylene (PAH)		
Anthracene (PAH)		
Dibenzo(a,h)anthracene (PAH)	2.29E-01 ug/l	1.91E-03 lbs/day
Indeno(1,2,3-cd)pyrene (PAH)	2.29E-01 ug/l	1.91E-03 lbs/day
Pyrene (PAH)	7.85E+04 ug/l	6.55E+02 lbs/day
Tetrachloroethylene	6.54E+01 ug/l	5.46E-01 lbs/day
Toluene	5.56E+05 ug/l	4.64E+03 lbs/day
Trichloroethylene	2.21E+02 ug/l	1.84E+00 lbs/day
Vinyl chloride	1.64E+02 ug/l	1.36E+00 lbs/day

Pesticides

Aldrin	1.06E-02 ug/l	8.87E-05 lbs/day
Dieldrin	1.15E-02 ug/l	9.55E-05 lbs/day
Chlordane	4.66E-02 ug/l	3.89E-04 lbs/day
4,4'-DDT	4.83E-02 ug/l	4.02E-04 lbs/day
4,4'-DDE	4.83E-02 ug/l	4.02E-04 lbs/day
4,4'-DDD	6.79E-02 ug/l	5.66E-04 lbs/day
alpha-Endosulfan	7.61E+01 ug/l	6.34E-01 lbs/day
beta-Endosulfan	7.61E+01 ug/l	6.34E-01 lbs/day
Endosulfan sulfate	7.61E+01 ug/l	6.34E-01 lbs/day
Endrin	6.22E+01 ug/l	5.18E-01 lbs/day
Endrin aldehyde	6.22E+01 ug/l	5.18E-01 lbs/day
Heptachlor	1.72E-02 ug/l	1.43E-04 lbs/day
Heptachlor epoxide		

PCB's

PCB 1242 (Arochlor 1242)	3.60E-03 ug/l	3.00E-05 lbs/day
PCB-1254 (Arochlor 1254)	3.60E-03 ug/l	3.00E-05 lbs/day
PCB-1221 (Arochlor 1221)	3.60E-03 ug/l	3.00E-05 lbs/day
PCB-1232 (Arochlor 1232)	3.60E-03 ug/l	3.00E-05 lbs/day
PCB-1248 (Arochlor 1248)	3.60E-03 ug/l	3.00E-05 lbs/day
PCB-1260 (Arochlor 1260)	3.60E-03 ug/l	3.00E-05 lbs/day
PCB-1016 (Arochlor 1016)	3.60E-03 ug/l	3.00E-05 lbs/day

Pesticide

Toxaphene	5.97E-02 ug/l	4.98E-04 lbs/day
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Metals

Antimony	1145.22 ug/l	9.55 lbs/day
Arsenic	4025.84 ug/l	33.57 lbs/day

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Asbestos	5.73E+08 ug/l	4.77E+06 lbs/day
Beryllium		
Cadmium		
Chromium (III)		
Chromium (VI)		
Copper	106342.02 ug/l	886.71 lbs/day
Cyanide	57261.09 ug/l	477.46 lbs/day
Lead	0.00	0.00
Mercury	11.45 ug/l	0.10 lbs/day
Nickel	49898.95 ug/l	416.07 lbs/day
Selenium	0.00	0.00
Silver	0.00	0.00
Thallium	139.06 ug/l	1.16 lbs/day
Zinc		
Dioxin		
Dioxin (2,3,7,8-TCDD)	1.06E-06 ug/l	8.87E-09 lbs/day

Metals Effluent Limitations for Protection of All Beneficial Uses
Based upon Water Quality Standards and Toxics Rule

	Class 4 Acute Agricultural ug/l	Class 3 Acute Aquatic Wildlife ug/l	Acute Toxics Drinking Water Source ug/l	Acute Toxics Wildlife ug/l	1C Acute Health Criteria ug/l	Acute Most Stringent ug/l	Class 3 Chronic Aquatic Wildlife ug/l
Aluminum		30954.2				30954.2	N/A
Antimony			1145.2	351746.7		1145.2	
Arsenic	8180.2	14044.1	4025.8		0.0	4025.8	15478.1
Barium					81801.6	81801.6	
Beryllium						0.0	
Cadmium	811.6	86.5			0.0	86.5	16.0
Chromium (III)		75570.4			0.0	75570.4	7075.6
Chromium (VI)	8115.9	501.8			0.0	501.82	578.63
Copper	16296.1	556.0	106342.0			556.0	709.1
Cyanide		910.8	#####			910.8	425.4
Iron		41350.3				41350.3	
Lead	8115.9	3415.5			0.0	3415.5	201.2
Mercury		99.36	11.5	12.27	0.0	11.45	0.981
Nickel		19648.8	49898.9	376287.1		19648.8	4259.2
Selenium	3961.6	763.8			0.0	763.8	247.8
Silver		160.9			0.0	160.9	
Thallium			139.1	515.3		139.1	
Zinc		5023.0				5023.0	9924.5
Boron	61351.2					61351.2	

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Summary Effluent Limitations for Metals [Wasteload Allocation, TMDL]

[If Acute is more stringent than Chronic, then the Chronic takes on the Acute value.]

	WLA Acute ug/l	WLA Chronic ug/l	
Aluminum	30954.2	N/A	
Antimony	1145.22		
Arsenic	4025.8	15478.1	Acute Controls
Asbestos	5.73E+08		
Barium			
Beryllium			
Cadmium	86.5	16.0	
Chromium (III)	75570.4	7076	
Chromium (VI)	501.8	578.6	Acute Controls
Copper	556.0	709.1	Acute Controls
Cyanide	910.8	425.4	
Iron	41350.3		
Lead	3415.5	201.2	
Mercury	11.452	0.981	
Nickel	19648.8	4259	
Selenium	763.8	247.8	
Silver	160.9	N/A	
Thallium	139.1		
Zinc	5023.0	9924.5	Acute Controls
Boron	61351.16		

Other Effluent Limitations are based upon R317-1.

E. coli 126.0 organisms per 100 ml

X. Antidegradation Considerations

The Utah Antidegradation Policy allows for degradation of existing quality where it is determined that such lowering of water quality is necessary to accommodate important economic or social development in the area in which the waters are protected [R317-2-3]. It has been determined that certain chemical parameters introduced by this discharge will cause an increase of the concentration of said parameters in the receiving waters. Under no conditions will the increase in concentration be allowed to interfere with existing instream water uses.

The antidegradation rules and procedures allow for modification of effluent limits less than those based strictly upon mass balance equations utilizing 100% of the assimilative capacity of the receiving water. Additional factors include considerations for "Blue-ribbon" fisheries, special recreational areas, threatened and endangered species, and drinking water sources.

An Antidegradation Level I Review was conducted on this discharge and its effect on the receiving water. Based upon that review, it has been determined that an

Antidegradation Level II Review is NOT Required if NH3 <= 0.8 mg/l

XI. Colorado River Salinity Forum Considerations

**Utah Division of Water Quality
Salt Lake City, Utah**

Discharges in the Colorado River Basin are required to have their discharge at a TDS loading of less than 1.00 tons/day unless certain exemptions apply. Refer to the Forum's Guidelines for additional information allowing for an exceedence of this value.

XII. Summary Comments

The mathematical modeling and best professional judgement indicate that violations of receiving water beneficial uses with their associated water quality standards, including important downstream segments, will not occur for the evaluated parameters of concern as discussed above if the effluent limitations indicated above are met.

XIII. Notice of UPDES Requirement

This Addendum to the Statement of Basis does not authorize any entity or party to discharge to the waters of the State of Utah. That authority is granted through a UPDES permit issued by the Utah Division of Water Quality. The numbers presented here may be changed as a function of other factors. Dischargers are strongly urged to contact the Permits Section for further information. Permit writers may utilize other information to adjust these limits and/or to determine other limits based upon best available technology and other considerations provided that the values in this wasteload analysis [TMDL] are not compromised. See special provisions in Utah Water Quality Standards for adjustments in the Total Dissolved Solids values based upon background concentration.

XIV. Special Considerations

TMDL Issues and Calculations may adjust these values as appropriate. See TMDL Section of DWQ

Prepared by:

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Utah Division of Water Quality
801-538-6329

File Name: Jordanelle Dam WWTP Feb 25 2008 Final

[Handwritten signature]
2-25-08

APPENDIX - Coefficients and Other Model Information

CBOD Coeff. (Kd)20 1/day 0.830	CBOD Coeff. FORCED (Kd)/day 0.000	CBOD Coeff. (Ka)T 1/day 0.830	REAER. Coeff. (Ka)20 (Ka)/day 5.082	REAER. Coeff. FORCED 1/day 0.000	REAER. Coeff. (Ka)T 1/day 5.082	NBOD Coeff. (Kn)20 1/day 0.400	NBOD Coeff. 1/day 0.400
Open Coeff. (K4)20 1/day 0.000	Open Coeff. (K4)T 1/day 0.000	NH3 LOSS (K5)20 1/day 4.000	NH3 (K5)T 1/day 4.000	NO2+NO3 LOSS (K6)20 1/day 0.000	NO2+NO3 (K6)T 1/day 0.000	TRC Decay K(CI)20 1/day 32.000	TRC K(CI)(T) 1/day 32.000
BENTHIC DEMAND (SOD)20	BENTHIC DEMAND (SOD)T						

Utah Division of Water Quality
Salt Lake City, Utah

Classification excludes 3A or 3B	No		
Considered as "poor quality" [DNR]	No		
Water body listed on 303(d) list	No	0.0	
Existing stream WQ > standard	No		
Water Quality Impacts are minor			
Increase in project loading < 20%	No		8.00E+09
Increase in Pollutant loading			
is < 20% over [avg] baseline	Yes	Off-ramped	19.8%
Small Discharge Volume			
Stream flow (avg) ■ Discharge Flow > 100:1	Yes	0.0	411.5
Stream flow (7Q10) 1 Discharge Flow > 25:1	Yes	0.0	193.4
Stream increase conc. < 10%	No	0.0	18.34%
All three above conditions are not violated.			
Executive Director requires Level II Review	No		
Antidegradation Level II Review is NOT Required if NH3 <= 0.8 mg/l			
Justification ■ Other Information:			